

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) ~~An alternating current switching~~ circuit comprising:
an alternating current switching circuit including:
 - a first Field Effect Transistor (FET) having a first source, a first gate and a first drain;
 - a second FET having a second drain, a second source coupled to said first source and a second gate coupled to said first gate;
 - a first intrinsic diode having a first anode coupled to said first source and a first cathode coupled to said first drain; [[and]]
 - a second intrinsic diode having a second anode coupled to said second source and a second cathode coupled to said second drain[.];
 - a third diode having a third anode coupled to said first source and a third cathode coupled to said first drain; and
 - a fourth diode having a fourth anode coupled to said second source and a fourth cathode coupled to said second drain.
2. (Original) The device of claim 1 wherein said first FET and said second FET are N type MOSFETs.
3. (Original) The device of claim 1 wherein said first FET and said second FET are power MOSFETs.
4. (Original) The device of claim 1 wherein said first diode and said second diode include turn-on voltages less than or equal to 1.2 volts.
5. (Currently Amended) ~~An alternating current switching~~ circuit comprising:
an alternating current switching circuit including:

a first Field Effect Transistor (FET) having a first source, a first gate and a first drain;

a second FET having a second drain, a second source coupled to said first source and a second gate coupled to said first gate;

a first intrinsic diode having a first anode coupled to said first drain and a first cathode coupled to said first source; [[and]]

a second intrinsic diode having a second anode coupled to said second drain and a second cathode coupled to said second source[.];

a third diode having a third anode coupled to said first source and a third cathode coupled to said first drain; and

a fourth diode having a fourth anode coupled to said second source and a fourth cathode coupled to said second drain.

6. (Original) The device of claim 5 wherein said first FET and said second FET are P type MOSFETs.

7. (Original) The device of claim 5 wherein said first FET and said second FET are power MOSFETs.

8. (Currently Amended) A device comprising:

an alternating current switching circuit including:

a first Field Effect Transistor (FET) having a first source, a first gate and a first drain[.];

a second FET having, a second drain, a second source coupled to said first source and a second gate coupled to said first gate[.];

a first diode having a first anode coupled to said first source and a first cathode coupled to said first drain; [[and]]

a second diode having a second anode coupled to said second source and a second cathode coupled to said second drain; [[and]]

a switch control circuit coupled to said first gate and said second gate and coupled to said first source and said second source, said switch control circuit to facilitate operation of said alternating current switching circuit at frequencies greater than 200 Hz[.]; and

a snubber circuit with one resistor in series with one capacitor, wherein said snubber circuit directly connects said first drain to said second drain.

9. (Original) The apparatus of claim 8 further comprising a load coupled to said alternating current switching circuit, wherein said switch control circuit facilitates pulse width modulation of current through said load.
10. (Canceled)
11. (Currently Amended) The apparatus of claim ~~[[10]]~~ 8 wherein said ~~resistor and capacitor~~ snubber circuit is designed to dissipate substantially all stored energy in said alternating current switching circuit.
12. (Original) The apparatus of claim 8 further comprising charge pump circuitry coupled to an alternating current power source and said switch control circuit.
13. (Original) The apparatus of claim 8 further comprising filtering circuitry to facilitate current flow through said load.
14. (Original) The apparatus of claim 8 wherein said switch control circuit is configured to operate said alternating current switching circuit at frequencies greater than 20 kHz.
15. (Currently amended) ~~[[In an]]~~ An integrated circuit, ~~an alternating current switching circuit~~ comprising:
an alternating current switching circuit including:
a first Field Effect Transistor (FET) having a first gate, a first drain, and a common source;
a second FET having a second gate, a second drain and said common source;
a first diode having a first anode coupled to said common source and a first cathode coupled to said first drain; ~~[[and]]~~
a second diode having a second anode coupled to said common source and a second cathode coupled to said second drain~~[[.]]; and~~
a snubber circuit with one resistor in series with one capacitor, wherein said snubber circuit directly connects said first drain to said second drain.

16. (Currently Amended) The ~~alternating~~ integrated ~~current-switching~~ circuit of claim 15 wherein said first gate is coupled to said second gate.

17. (Canceled)

18. (Currently Amended) The ~~alternating~~ integrated ~~current-switching~~ circuit of claim ~~[[17]]~~ 15 wherein said series resistor and capacitor are designed to dissipate substantially all stored energy in said alternating current switching circuit.

19. (Currently Amended) The ~~alternating~~ integrated ~~current-switching~~ circuit of claim 15 wherein said first gate is coupled to said second gate and wherein said alternating current switching circuit further comprises a switch control circuit coupled to said coupled gates and said common source, said switch control circuit to facilitate operation of said alternating current switching circuit at frequencies greater than 200 Hz.

20. (Currently Amended) The ~~alternating~~ integrated ~~current-switching~~ circuit of claim 15 wherein said first FET and said second FET are power MOSFETs.

21. (Currently Amended) The ~~alternating~~ integrated ~~current-switching~~ circuit of claim 15 wherein said first FET and said second FET are N-type MOSFETs.

22. (Currently Amended) The ~~alternating~~ integrated ~~current-switching~~ circuit of claim 15 ~~wherein the integrated circuit comprises~~ including a four pin device having a first pin coupled to said first and said second gate, a second pin coupled to said common source, a third pin coupled to said first drain and a fourth pin coupled to said second drain.

23. (Canceled)

24. (Canceled)

25. (Currently amended) A method of switching alternating current

comprising:

receiving alternating current (AC) from a source;
switching said alternating current utilizing a MOSFET switch having two MOSFET devices with coupled sources and coupled gates and two diodes antiparallel to each MOSFET device; and
controlling the switching of said alternating current, by said MOSFET switch, at frequencies greater than 200 Hz.

26. (Original) The method of claim 25 further comprising providing switched AC to a load.

27. (Currently amended) In an integrated circuit, a method of switching alternating current comprising:

receiving alternating current (AC) from a source; and
applying said alternating current across drains of two MOSFET devices of a switch, where there is a snubber circuit connected directly across said drains, where the two MOSFET device having a common source region, and their gates are coupled together, and the switch further having diodes that are antiparallel to each MOSFET device, flowing said alternating current through said common source region.

28. (Canceled).